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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,648	09/22/2003	Walter H. Christiansen	US.03.036	1123

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EXAMINER
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FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

MAIL DATE	DELIVERY MODE
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06/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/667,648	<b>Applicant(s)</b> CHRISTIANSEN ET AL.	
	<b>Examiner</b> Michael J. Feely	<b>Art Unit</b> 1712	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Pending Claims***

Claims 1-7, 9-14, and 16-18 are pending.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 23, 2007 has been entered.

### ***Response to Amendment***

2. The rejection of claims 1, 3-7, 9-14, and 16-18 under 35 U.S.C. 102(b) as being anticipated by Allen (US Pat. No. 4,393,181) *has been overcome by amendment.*
3. The rejection of claim 2 under 35 U.S.C. 103(a) as being unpatentable over Allen (Reg. No. 4,393,181) in view of Seltzer et al. (US Pat. No. 4,168,364) *has been overcome by amendment.*

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7, 9-11, 14, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by de la Mare et al. (EP 0083813).

Regarding claims 1-7, 9-11, 14, and 16-18, the prior art discloses: *(1)* a process for preparing a resin coated article, the process comprising contacting a substrate with an accelerated resin composition (Abstract; page 2) comprising an epoxy resin (Abstract; page 2), a curing agent (Abstract; page 2), and an alkali metal containing cure accelerator compound *see claim for list* (Abstract; pages 2 & 7); wherein the curing agent is an amine or amide containing curing agent with epoxy-reactive NH groups (Abstract; pages 2-7); wherein the epoxy resin is derived from the reaction of an epihalohydrin and a phenol or a phenol type compound (Abstract; pages 2-3); and wherein the contacting occurs by a contacting method (Abstract; page 2 & 11);

*(2)* wherein the accelerated resin composition further comprises one or more solvents (Abstract; pages 7-8);

*(3)* wherein the accelerated resin composition is in powder, hot melt, solution, or dispersion form (Abstract; pages 2 & 11);

*(4)* wherein the contacting method is selected from the group consisting of powder coating, spray coating, die coating, roll coating, resin infusion and contacting the substrate with a bath comprising the accelerated resin composition (Abstract; pages 2 & 11);

*(5)* wherein the substrate comprises a material selected from the group consisting of glass, fiberglass, quartz, paper, thermoplastic resin, an unwoven aramid reinforcement, carbon, graphite, ceramic, metal and combinations thereof (Abstract; pages 2 & 11);

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(6) wherein the article is a prepreg, wherein the substrate comprises a material selected from the group consisting of glass, fiberglass, quartz, paper, thermoplastic resin, an unwoven aramid reinforcement, carbon, graphite, ceramic, metal and combinations thereof, and wherein the contacting occurs in a bath comprising the accelerated resin composition and optionally one or more solvents (Abstract; pages 2 & 11); (7) wherein the substrate is glass or fiberglass in the form of a woven cloth or a mat (Abstract; pages 2 & 11);

(9) wherein the alkali metal containing cure accelerator compound is selected from the group consisting of an alkali metal containing hydroxide, alkoxide, phenoxide, carboxylate, halide salt, carbonate and combinations thereof (Abstract; pages 2 & 7);

(10) wherein the alkali metal containing compound is represented by the formula MOR or  $(MO)_n-R$  wherein M is a metal selected from Group 1 of the periodic table of elements, O is oxygen, and R is hydrogen or a substituted or unsubstituted hydrocarbyl group (Abstract; pages 2 & 7); (11) wherein M is lithium, sodium or potassium, and R is hydrogen or a  $C_1$  to  $C_{40}$  hydrocarbyl group (Abstract; pages 2 & 7);

(14) wherein the alkali metal containing cure accelerator compound is utilized in an amount greater than 0.00001 molar equivalents per 100 grams of epoxy resin solids (Abstract; pages 2 & 7);

(16) wherein the phenol or a phenol type compound is selected from the group consisting of bisphenols, halogenated bisphenols, hydrogenated bisphenols, novolac resins, polyalkylene glycols and combinations thereof (Abstract; pages 2-3);

(17) a resin coated article prepared by the process of claim 1 (Abstract; page 11); and

(18) a prepreg prepared by the process of claim 1 (Abstract; page 11).

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6. Claims 1-4, 14, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Shomer (US Pat. No. 5,958,593).

Regarding claims 1-4, 14, 16, and 17, the prior art discloses: *(1)* a process for preparing a resin coated article, the process comprising contacting a substrate with an accelerated resin composition (Abstract; column 1, line 45 through column 2, line 31) comprising an epoxy resin (Abstract; column 1, line 45 through column 2, line 31), a curing agent (Abstract; column 1, line 45 through column 2, line 31), and an alkali metal containing cure accelerator compound *see claim for list* (Abstract; column 1, line 45 through column 2, line 31); wherein the curing agent is an amine or amide containing curing agent with epoxy-reactive NH groups (Abstract; column 1, line 45 through column 2, line 31); wherein the epoxy resin is derived from the reaction of an epihalohydrin and a phenol or a phenol type compound (column 3, lines 45-68); and wherein the contacting occurs by a contacting method (Abstract; column 1, line 45 through column 2, line 31);

*(2)* wherein the accelerated resin composition further comprises one or more solvents (Abstract; column 1, line 45 through column 2, line 31; column 3, lines 16-23);

*(3)* wherein the accelerated resin composition is in powder, hot melt, solution, or dispersion form (Abstract; column 1, line 45 through column 2, line 31);

*(4)* wherein the contacting method is selected from the group consisting of powder coating, spray coating, die coating, roll coating, resin infusion and contacting the substrate with a bath comprising the accelerated resin composition (Abstract; column 1, line 45 through column 2, line 31);

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(14) wherein the alkali metal containing cure accelerator compound is utilized in an amount greater than 0.00001 molar equivalents per 100 grams of epoxy resin solids (column 2, line 66 through column 3, line 15);

(16) wherein the phenol or a phenol type compound is selected from the group consisting of bisphenols, halogenated bisphenols, hydrogenated bisphenols, novolac resins, polyalkylene glycols and combinations thereof (column 3, lines 34-46); and

(17) a resin coated article prepared by the process of claim 1 (Abstract; column 1, line 45 through column 2, line 31).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Mare et al. (EP 0083813).

Regarding claims 12 and 13, de la Mare et al. disclose the use of a group I or II metal salt selected from the group consisting of nitrates, iodides, thiocyanates, *alkoxides*, perchlorates, and sulphonates. They fail to explicitly disclose: (12) wherein OR represents a hydroxy, a methoxy, an ethoxy, an n-propoxy, an isopropoxy, an n-butoxy, an iso-butoxy, a sec-butoxy, a tert-butoxy, or a phenoxy group; and (13) wherein the alkali metal containing compound is selected from the

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group consisting of lithium hydroxide, sodium hydroxide, potassium hydroxide, sodium methoxide, potassium methoxide, lithium methoxide and combinations thereof.

It is the Examiner's position that the skilled artisan would have readily envisaged these particular materials based upon the disclosure of *alkoxides*. The claims disclose the most common of the lower-alkoxides, including methoxy. At the very least, these lower alkoxy groups are obviously encompassed by the prior art's disclosure of *alkoxides*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the materials of claims 12 and 13 in the composition of de la Mare et al. because de la Mare et al. contemplate the use of a group I or II metal salt selected from the group consisting of nitrates, iodides, thiocyanates, *alkoxides*, perchlorates, and sulphonates. At the very least, these lower alkoxy groups are obviously encompassed by the prior art's disclosure of *alkoxides*.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shomer (US Pat. No. 5,958,593).

Regarding claim 5, Shomer generally disclose that his composition is "for protective coatings, castings, and electrical applications" (*see column 1, lines 14-28*); however, they fail to explicitly disclose: (5) wherein the substrate comprises a material selected from the group consisting of glass, fiberglass, quartz, paper, thermoplastic resin, an unwoven aramid reinforcement, carbon, graphite, ceramic, metal and combinations thereof.

It is the Examiner's position that a composition used in this capacity would have obviously been applied to at least one of the materials set forth in claims 5. This Markush



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groups covers nearly all of the materials used in electrical applications, such as glass, fiberglass, unwoven reinforcement, ceramic, and metal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to select a substrate set forth in claim 5 for the composition of Shomer because Shomer discloses that his composition is for protective coatings, castings, and electrical applications.

The materials set forth in claim 5 cover nearly all of the materials used in electrical applications, such as glass, fiberglass, unwoven reinforcement, ceramic, and metal.

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***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely  
Primary Examiner  
Art Unit 1712

June 10, 2007

**MICHAEL FEELY  
PRIMARY EXAMINER**